



Understanding Army Ranges

**Army Training Support Center
MAR 04**



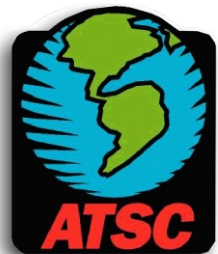
Agenda

- **Quick Overview of Army Training.**
- **Live Training Doctrinal Throughput Requirements.**
- **Range Operations.**
- **Transformation**
- **Conclusions and Questions.**



Army Training- The 3 Domains

- **The Institutional Domain** (The Schoolhouse) is the foundation for life-long learning for leaders and soldiers.
 - Initial Military Training.
 - Officer Education and Warrant Officer Education System.
 - NCO Education System.
 - Functional Training.
- **The Operational Domain** is unit training - the commander's and NCOs' responsibility.
 - Individual, collective & leader development training.
 - Culminates in major training exercises and at the Combat Training Centers.
- **The Self-Development Domain** is a continuous planned process emphasized in the institutional and operational domains.

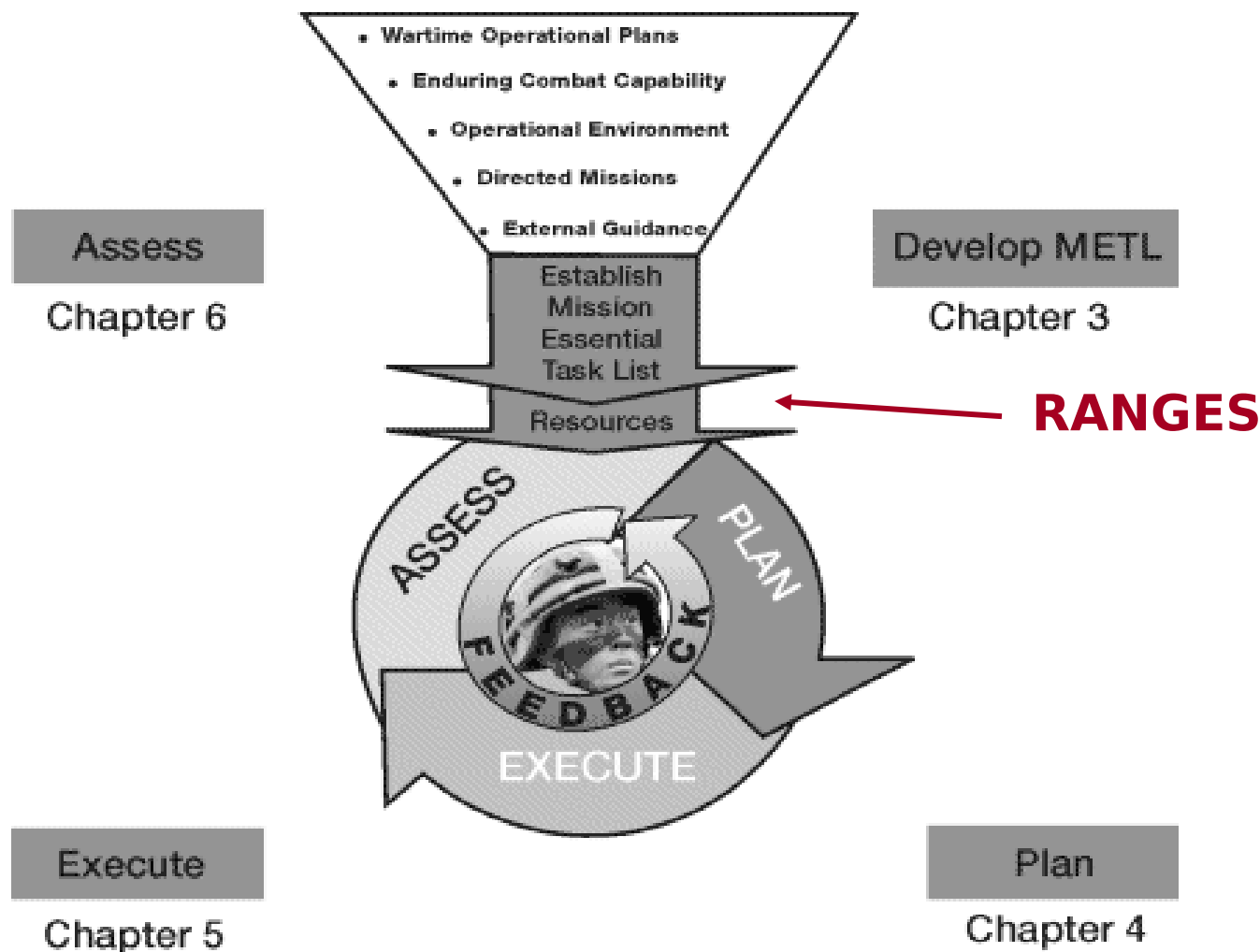


Live Training is the Key (FM 3.0 & FM 7.0)

- **“Units must train to standard under realistic conditions.”**
- **“Commanders must seize every opportunity to move soldiers out of the classroom and into the field; fire weapons; maneuver as a combined arms team; and incorporate protective measures against enemy action.”**
- **“Battalion level units attain and sustain warfighting proficiency and develop soldier fieldcraft primarily through live training.”**
- **But how do you determine what soldiers and units do on training ranges and what ammunition they use?**
 - **If you know, then you can plan to provide, support and defend Army ranges.**



The Army Training Management Cycle





A Typical Army "Range" Complex

Small Arms Ranges



Crew-served Weapons Ranges



Multi-purpose Ranges

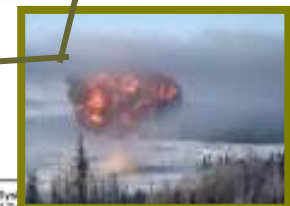
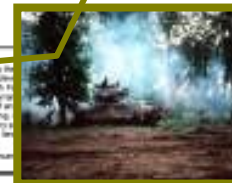


Special Purpose Range

Impact Areas

- Non- Dudded
- Dudded

Training Areas





Doctrinal Throughput Requirements

Installation Training Capacity (ITC) Methodology

A G3 initiative to assess Installation Live Training Capability

Standardized, Scored

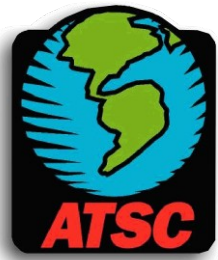
Allows What-Ifs

Used for DA Stationing Analysis

Quantifies:

- Through-put Requirements
- Throughput Capacity

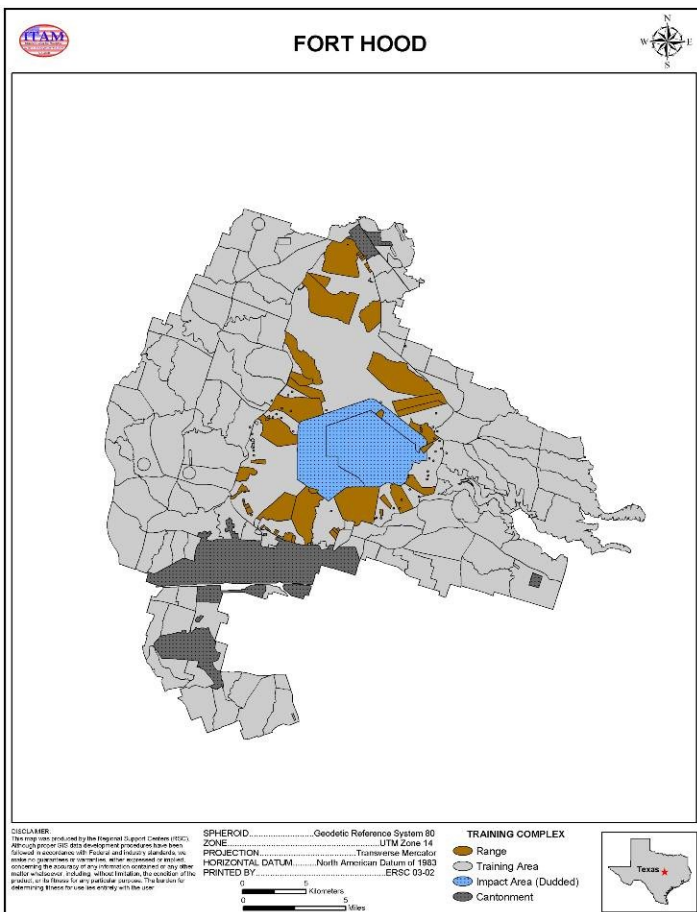


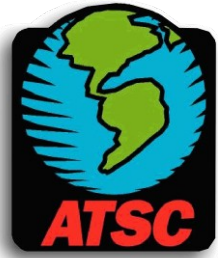


TC 25-1, *Training Land*



- **Primary source for maneuver land information:**
 - **For All Branches and Eschelons:**
 - Provides standard maneuver boxes
 - Required annual Iterations
 - Requirements in KM²-Days
 - Provides guidance on Land Use Requirements Studies (LURS)
 - Provides Installation Maps





TC 25-8, *Training Ranges*



- **Primary source for range information:**
 - **Provides standard range designs and targetry options.**
 - **Standard range diagrams.**
 - **Includes a matrix that links weapons to specific ranges.**
 - **Provides process for determining “throughput” requirements and range planning.**
 - **Provides guidance on range operations.**



The STRAC Manual



- **DA Pamphlet 350-38, “Standards in Weapons Training” has undergone major revision.**
- **What is STRAC?**
 - **A standards-based training strategy expressed as training events.**
 - **The method to determine quantities and types of ammunition essential for soldiers and crews to attain & sustain weapons proficiency.**
 - **What events will I train? How much ammo do I need? How much should I order? How much will it cost?**
- **A Total Army approach - Active & Reserve units train the same events. (The frequency and echelon may vary.)**



Where Can I Find These Resources?



- ITC Methodology
 - <ftp://ftp.atsc.army.mil/ATMD/ITC/>
- DA Pam 350-38.
 - www.atsc.army.mil/ Choose the STRAC Link.
- TC 25-1, *Training Land* and TC 25-8, *Training Ranges*.
 - New MAR 04
 - www.atdl.army.mil
- **Must Read** - The Army Sustainable Range Program Plan, dtd 14 July 2003. <http://www.army-itam.com> Choose the Sustainable Range Program Link.
 - The “overarching guidance” on range and land programs.
- AR 350-XX, SRP in draft



Range Operations

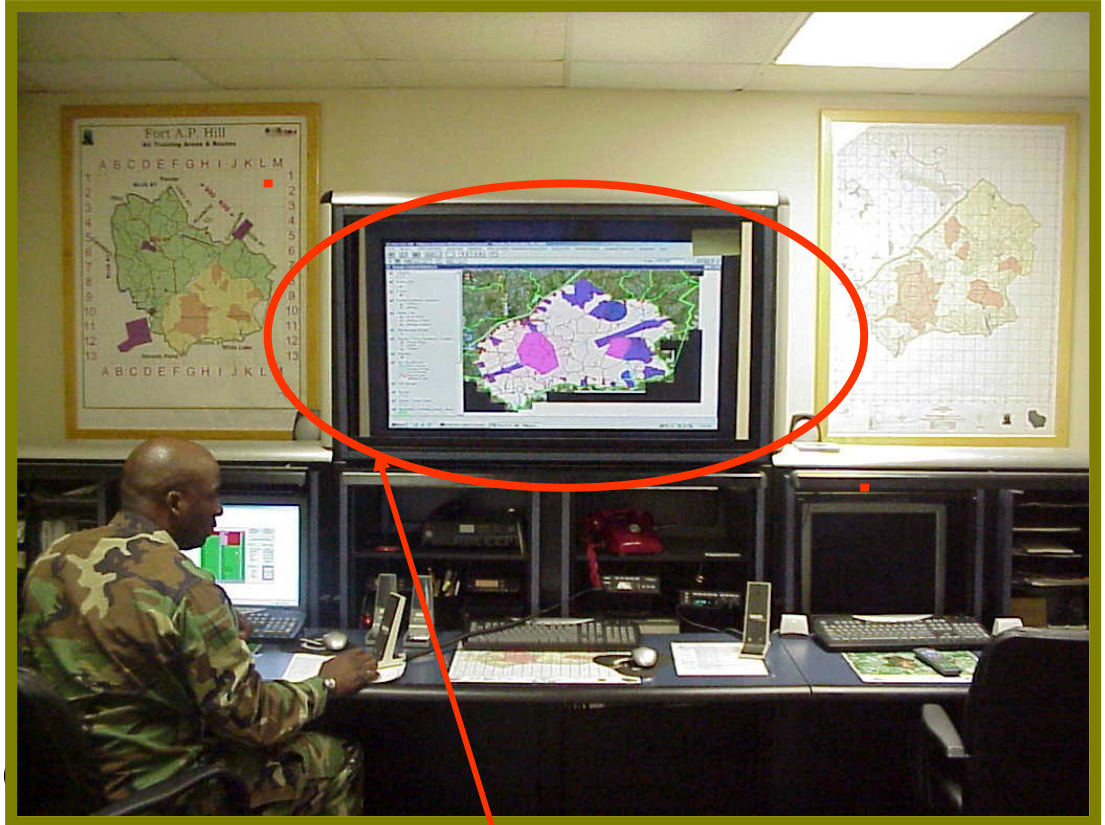


- Range Division DAC's/CME' in AC & USAR and some reimbursable State employees in ARNG.
- Day-to-day range ops.
 - *Consumables*
 - *Contracts*
 - *Other misc functions*
- Maintenance of range technology.
- New Range and NEPA plan documents.
- Operational UXO clearance



Range Operations

- **SCHEDULE**
- **SUPERVISE**
- **ENSURE SAFETY**
- **OPERATE**
- **MANAGE**
- **RECORD-KEEPING**
- **“MAINTAIN”**
- **PLAN TO SUPPORT NEW MISSIONS**



Range Facility Management
Support System (RFMSS)

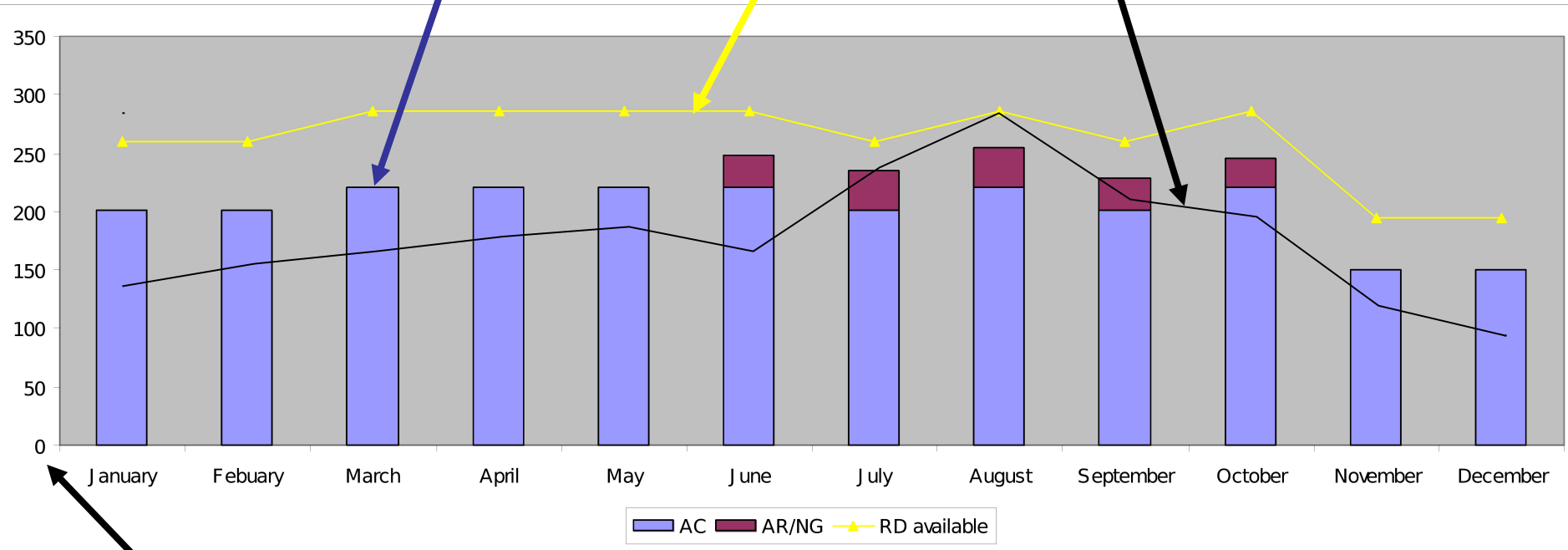


Range Records & Data.

- **Range Facility Management Support System (RFMSS)**
 - The Army and USMC standard range operations system.
 - Fielded at 38 sites, will complete total of 105 by end of 2005.
- The **data source of record** for ranges and ammunition to support DoD 4715.11/12 “permanent” record keeping requirements.
 - Date and time range was operational.
 - Units that trained on ranges.
 - Type (DODIC) and quantities of ammunition fired.
 - Dud rates (Calculated by Army Environmental Center).
 - Where rounds landed (Surface Danger Zones - SDZ).
 - Data can be sorted, queried, etc.



Automation Tool Requirements, Capacity, Utilization



Range-Days (or DODIC)

RPLANS / ARRM / DAART: Rqmts and Capacity

RFMSS: Utilization



The Scope of the Challenge

- **Soldiers and units must train on ranges to achieve operational readiness and battlefield success. In a training year:**
 - **An Apache Attack Helicopter Squadron will shoot 2000 (2.75mm) rockets and 16,000 .30 cal rounds.**
 - **An artillery battalion will shoot 4000 rounds. *There are about 35 battalions in the Active Army. (= 125,000 rounds)***
 - **An infantry mortar crew will fire 200 rounds.**
 - **A machine gunner will fire 6000 rounds.**
 - **An infantryman will fire 2000 rounds, and every soldier fires at least 100 rounds in the Active Army. (= 100,000,000 rounds).**
- **Small changes in the design, production, performance and cost of (non-toxic) ammunition have big impacts!**

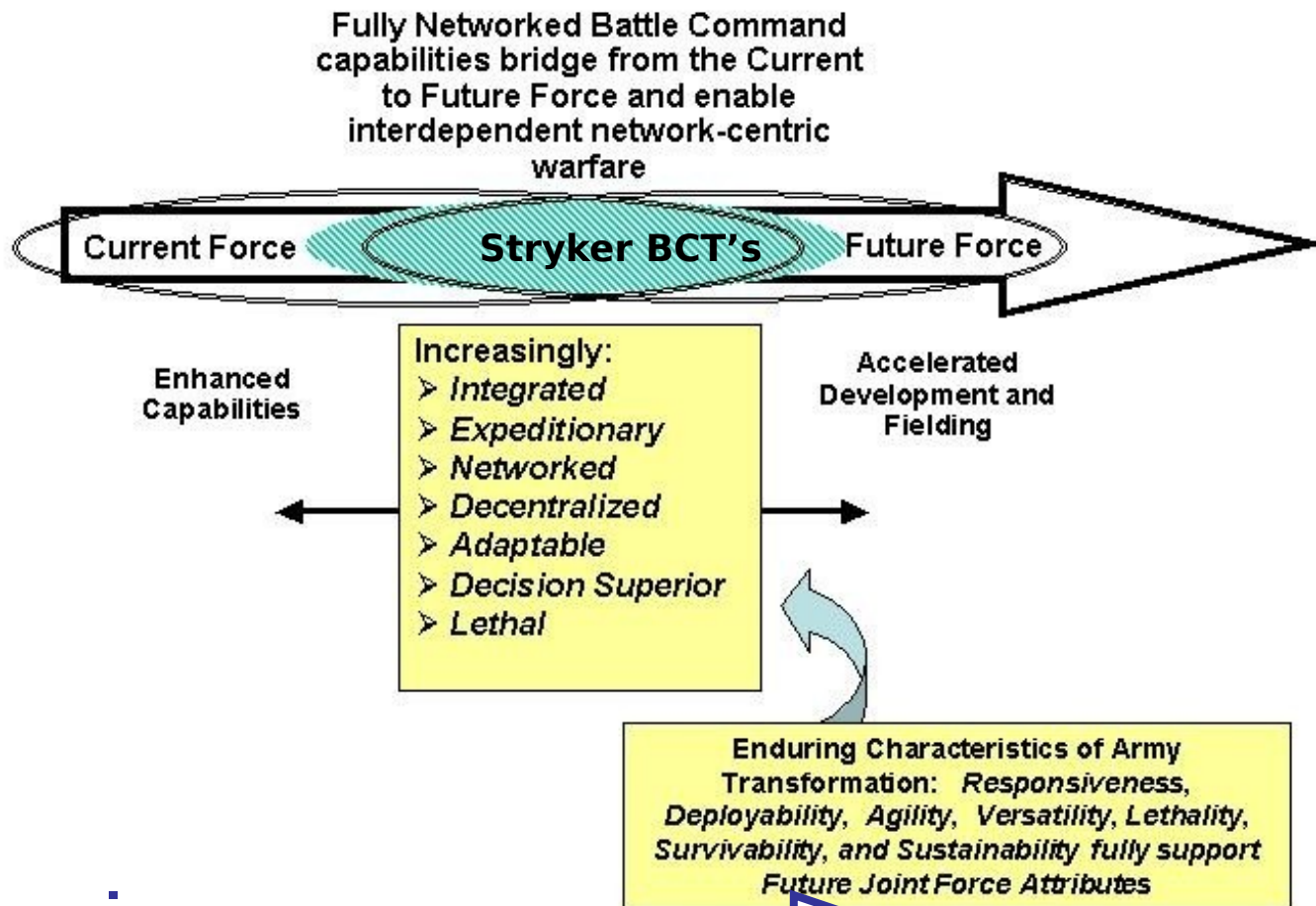
Army Operational Ranges



10,520 on 459 Sites totaling 15.2 million acres



Transformation





ARMY TRANSFORMATION

TRADOC UNDERPINNING OF TRANSFORMATION



Senior Leaders Training Support Conference (25-26 Feb 02)



Collective Training Panel

Theme:

**Linking Home Stations, Institutions,
and CTCs to Positively Effect Training
and Leader Development to Enhance
Unit Readiness**



ARMY TRANSFORMATION

TRADOC UNDERPINNING OF TRANSFORMATION



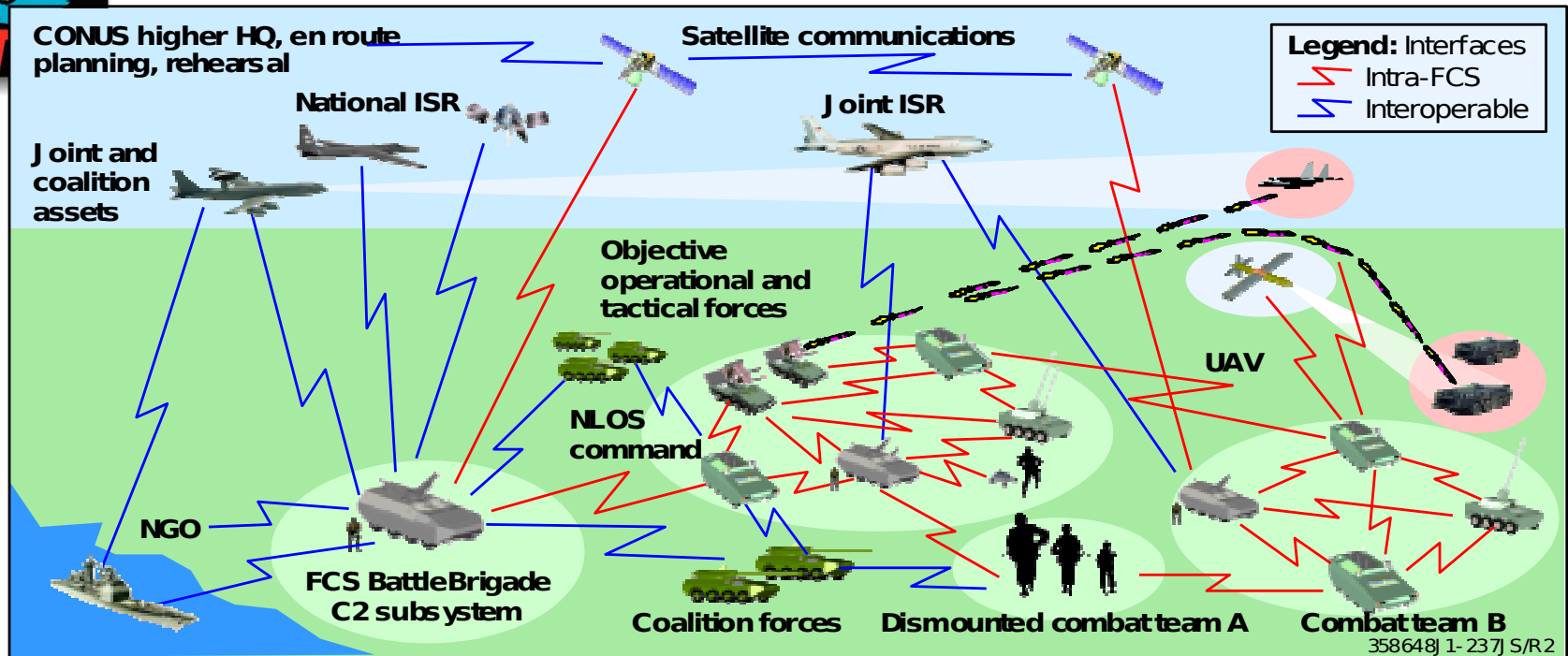
Proposed L-V-C Training Enabler Template

	LEADERS			STAFFS			UNITS		
	Crawl	Walk	Run	Crawl	Walk	Run	Crawl	Walk	Run
Corps/ARFOR/JTF				C	C	C			
Division	C	C	V-C	C	C	C			
Brigade	C	C	L-V-C	C	C	L-C			L
Battalion	V-C	V-C	L-V-C	C	C	L-C			L
Company/Btry/Troop	V-C	V-C	L				L-V	L-V	L
Platoon	V-C	V-C	L				L-V	L-V	L
Crew/Squad	V-C	V-C	L				L-V	L-V	L

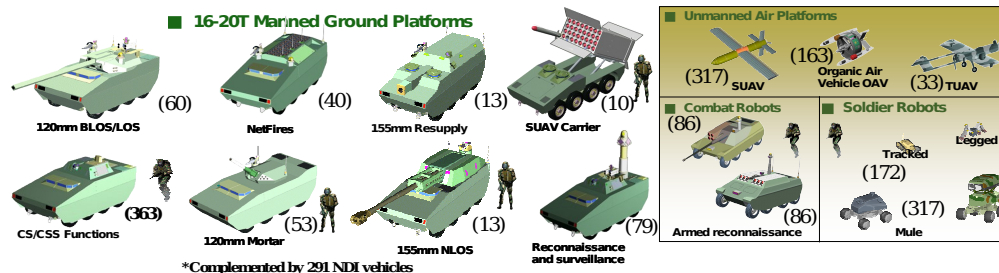
Live Training Remains Essential to Readiness



Future Force Concept

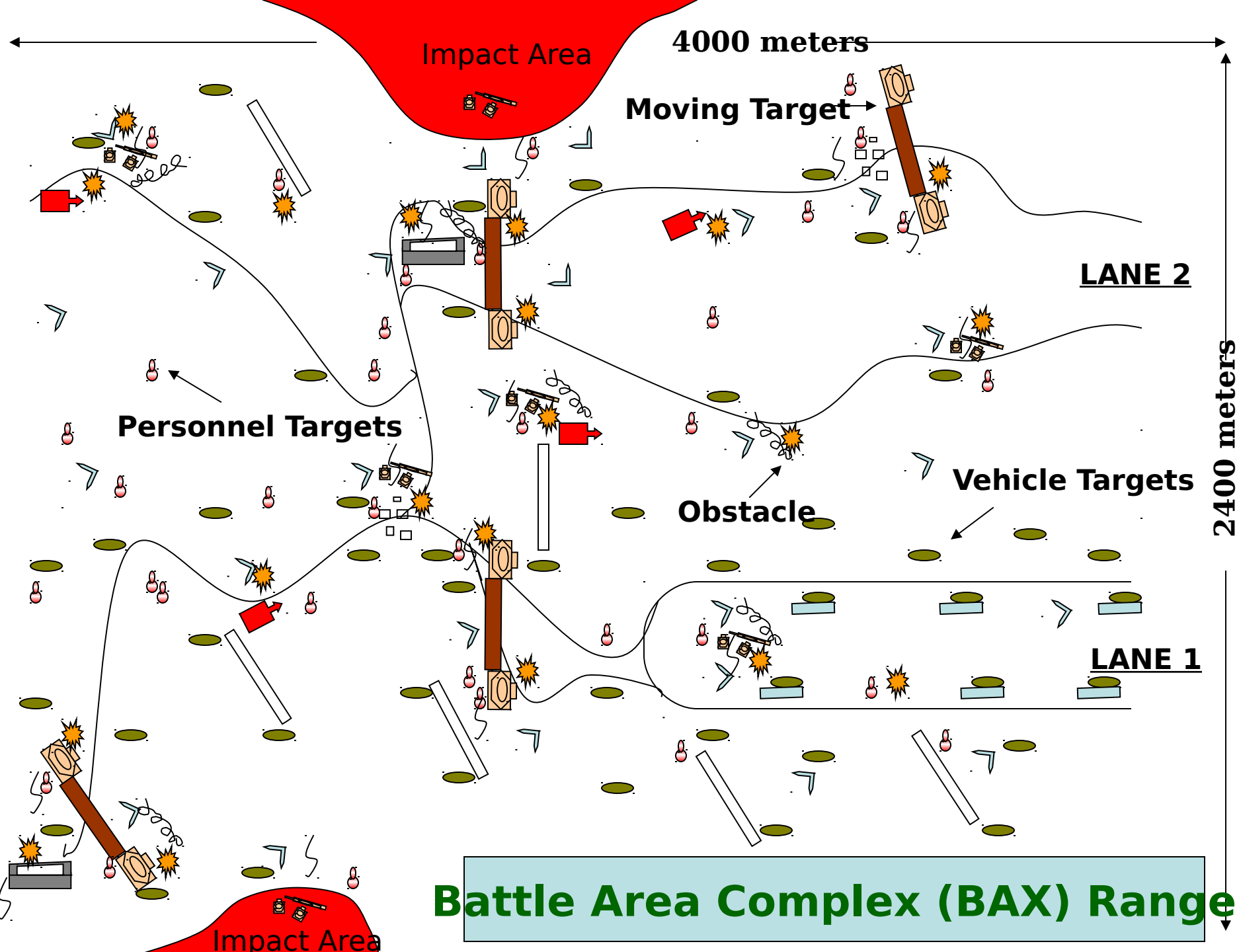


Future Combat System (FCS)



**Unit of Action (UA) =
Brigade Combat Team**

**Unit of Employment (UE)
= Division**



Battle Area Complex (BAX) Range



Future Force Range Complex

MOBILITY/COUNTERMOBILITY RANGE

F-O-F

LOS CREW/DISMOUNT INF RANGE
LOS CREW QUAL RANGE
MOUNTED LOS URBAN GUNNERY

FORCE PROTECTION RANGE

INDIVIDUAL SKILLS AREA

HITS

CALFE

5 x 8 E

X

Demo Rge

LIVE FIRE

CL V

Arrival Airfield

FARRP

75 Km AVIATION TNG RNG

8 x 16

10 x 12

8 x 16

NLOS QUALIFICATION

WMD DEFENSE AREA

MOUT-CACTF

FCS QUALIFICATION
ARV QUALIFICATION

5 x 16 Each

UAV FLIGHT AREA

10 x 12

10 x 12

CLOSE BATTLE QUALIFICATION COMPLEX

F-O-F

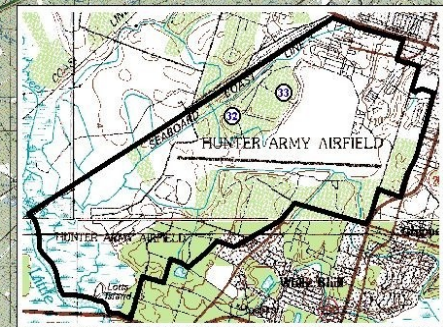
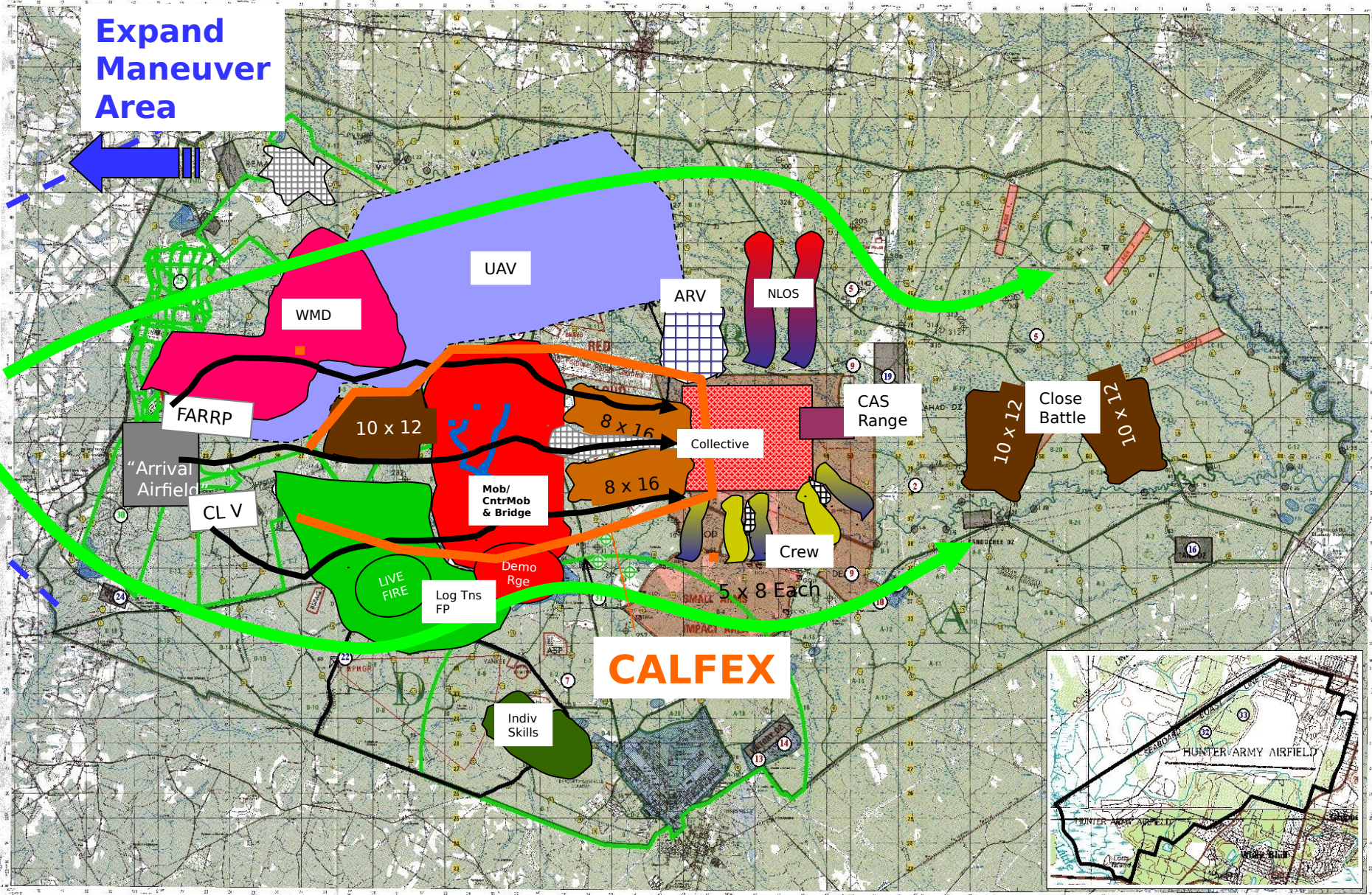
150 Km

2 Million Acres

RANGE & TRAINING LAND DEVELOPMENT PLAN



**Expand
Maneuver
Area**



MCA Range & Training

- 1 - Range Control Facility
- 2 - Urban Assault Course
- 3 - CACTF
- 4 - Digital MPRC
- 5 - Shoot House (+2)
- 6 - DMPTR (RC)
- 7 - Pave Main Tank Trails
- 8 - MPRC Staging Area

MCA Revitalization

- 12 - NCO Academy
- 13 - Airfield BASOPS, WAAF
- 14 - Fire Station, WAAF

UMMCA

- 15 - UAV Facility (FY03)

Delta SAIA

OMA

- 16 - Upgrade Taro Stage Field (FY03)
- 17 - Main/Target Repair Bldg (FY03)
- 18 - IPB C (FY03)
- 19 - Widen Calahad DZ (FY03)
- 20 - Thermal Sights/Cameras - RC Ranges (FY03)
- 21 - MPRC Tower Upgrade (FY03)
- 22 - Vehicle FP's - MK19 Range (FY03)
- 23 - Arrowhead (RC Hotel) (FY03)

LRAM

- 25 - Western Maneuver Lane
- 26 - Bethel Maneuver Lane
- 27 - Transition to Maneuver To Live Fire
- 28 - Maneuver to Live Fire Lane
- 29 - Remagen Maneuver Lane
- 30 - Jack Maneuver Lane
- 31 - Close-In Training Area
- 32 - Artillery Firing Points [10 per yr]

HAAF

- 32 - SRTA Shoot House
- 33 - SA Range Upgrade

RANGE DEVELOPMENT PLAN

IAW AR 210-20 & 210-21

APPROVED BY INSTALLATION PLANNING BOARD
08 JANUARY 2003
PREPARED AND MAINTAINED BY POLI STEWART TEAM PROGRAM
LHA, FALCON OR SPECIALIST



Some Suppositions?

- The Army has lots of ranges and fires lots of non-dud producing and dud-producing rounds.
- The Army has processes in place for predicting what it will shoot and recording what it shot.
- The Army's Future Forces will fire different ammunition on expanded and complex ranges.
- We are already transforming -- 3ID
- EMS Will Be Institutionalized
-
-
-



Some Constraints?

- **The Army Facility Strategy (67 Years)**
 - **Must Take Care of What We Have While Modernizing**
- **MILCON Process**
- **Must-Fund Policy**
- **Encroachment**
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-
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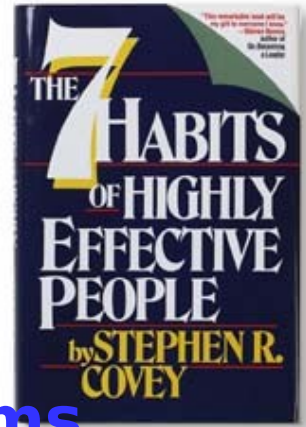


Technology Focus?

- **Munitions**
 - Quantity, UXO-C, dud Rate, Fate & Transport?
- **Transformation ranges or installations?**
- **Soldiers most critical resource - training days?**
- **Minimize Encroachment Impacts?**
- **????**
-
-
-
-



Land Sustainment



“Natural Principles ... There are problems that common approaches can not solve.

The

quick, easy, free, and fun approach won't work on the farm because there we're subject to natural laws or governing principles ... The only thing that endures over time is the law of the farm: I must prepare the ground, put in the seed, cultivate it, weed it, water it, then gradually nurture growth and development to full maturity.”



How Can You Help?

